# ARIZONA GAME AND FISH DEPARTMENT
# HERITAGE DATA MANAGEMENT SYSTEM

**Plant Abstract** **Element Code:** PDCAC0J0T0
**Data Sensitivity:** Yes

## CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

**NAME:** *Sclerocactus sileri*
**COMMON NAME:** Siler's Fish-Hook Cactus, House Rock Fishhook Cactus
**SYNONYMS:** *Sclerocactus pubispinus* var. *sileri*
**FAMILY:** Cactaceae

**AUTHOR, PLACE OF PUBLICATION:** *Sclerocactus pubispinus* (Engelm.) D. Woodruff & L. Benson var. *sileri* L. Benson, The Cacti of Arizona, ed. 3. 23:179. 1969. *Sclerocactus sileri* (L. Benson) K.D. Heil & J.M. Porter, nom. et stat. nov., Haseltonia, 2:39. 1994.

**TYPE LOCALITY:** Southern Utah, 1888, P.H. Siler. See "**Total Range**" for comments.

**TYPE SPECIMEN:** IT: US, P.H. Siler s.n. (F). 1888.

**TAXONOMIC UNIQUENESS:** "J. Busek (1983) applies the name *S. pubispinus* var. *sileri* to those cacti in southwestern Utah and Nevada; however, *S. pubispinus*, *S. spinosior*, and *S. blainei* of the Great Basin are not the same species as *S. sileri*, which is found on the Arizona strip" (Heil and Porter 1994). "*S. pubispinus* var. *sileri* included in *S. spinosior* in Kartesz (1994), but recognized as distinct, at the species level in Kartesz (1999)." (NatureServe 2002).

**DESCRIPTION:** A perennial cactus with 1 (-2) green, depressed globose stems, up to 5.5 cm (2.2 in) long, and 3.5-5.5 cm (1.4-2.2 in) in diameter. Ribs usually 13, not well-developed, with 7-12 mm long tubercles protruding above the ribs; areoles 3-4 mm in diameter and 12-15 mm apart. There are 4 central spines with the lower central spine white, gray or purplish tinged, angled, strongly hooked and slightly contorted. Central spines are 1.2-3 cm long and 0.5-1 mm wide, turned or curving somewhat downward. The two lateral central spines are flattened, usually not hooked, but narrower and thicker than the middle uppermost central spine. The upper central spine is white to tan, recurved, strongly flattened, conspicuous, erect; radial spines 6-8, acicular. Flowers are 2.5-3 cm (1-1.2 in) long and 2.5-3 cm in diameter, with a glabrous exterior floral tube. The outer tepals have brownish and yellowish margins, the larger oblanceolate, 10-15 mm long, mucronate, marginally membranous and crisped or minutely toothed. The inner tepals are yellow, sometimes suffused with brown, the largest lanceolate, 15-25 mm long and mucronate. The filaments are white, 7-10 mm long, anthers yellow, about 1 mm long; style yellowish-green, 14-20 mm long; stigma lobes 5-8 and about 1.2-2.5 mm long; ovary 3-7 mm long at anthesis. The fruit is green, turning red, ovoid, dry, and 0.8-2.2 cm long. Fruits dehisce longitudinally, along two to four ventral slits. Black seeds are 2.75-3 mm in diameter and 2.25-2.5 mm long.

**AIDS TO IDENTIFICATION:** *Sclerocactus sileri* has "characteristics similar to both *S. whipplei* and *S. spinosior*. The spination and flower color is reminiscent of *S. whipplei*; however, the fruit dehisces (by 2-4 longitudinal slits) as in *S. spinosior*." (Heil and Porter 1994). It is distinguished from *S. whipplei* and *S. parviflorus* that have fruits with basal dehiscence.

**ILLUSTRATIONS:** Color photo (Heil and Porter 1994: Fig. 18)
Color photo of plant and habitat (ARPC 2001)
B&W drawing (ARPC 2001)

**TOTAL RANGE:** Inconsistencies exist to the range of this species, mainly due to the confusion of the taxonomy over the years. Even the 1994 (Heil and Porter) revision of Sclerocactus, provides conflicting information on the range. They state that the distribution is Coconino County, Arizona and Clark County, Nevada. However they list the type locality as "Southern Utah", and then provide a range map (Fig. 25, based on herbarium collections), showing that it only occurs in northern Coconino County, Arizona. Future distribution studies seem to be in order, to resolve this confusion.

**RANGE WITHIN ARIZONA:** House Rock Valley and Paria Plateau, Coconino Co., Arizona.

## SPECIES BIOLOGY AND POPULATION TRENDS

**GROWTH FORM:** Perennial succulent.

**PHENOLOGY:** Flowers April and May, and fruits May and June.

**BIOLOGY:**

**HABITAT:** Pinyon-juniper mesa tops.

**ELEVATION:** In Arizona: 4,200-7,040 ft (1280-2146 m).

**EXPOSURE:**

**SUBSTRATE:** Sandstone to sandy soil of Moenave, Chinle and Navajo Formations.

**PLANT COMMUNITY:** *Sclerocactus sileri* often occurs in grama grass (*Bouteloua*), associated with drop seed (*Sporobolus*), yucca (*Yucca*), hedgehog cactus (*Echinocereus*), sagebrush (*Artemisia*), snakeweed (*Gutierrezia*), pinyon (*Pinus edulis*), and juniper (*Juniperus*).

**POPULATION HISTORY AND TRENDS:** Not well known. It is difficult to locate in the field, and appears to be quite rare and potentially in need of protection.

## SPECIES PROTECTION AND CONSERVATION

**ENDANGERED SPECIES ACT STATUS:** None (USDI, FWS 1990)
[3C Full Sp. Syn. *S. pubispinus* USDI, FWS 1985]
[C1 Full Sp. Syn. *S. pubispinus* USDI, FWS 1980]

**STATE STATUS:** Salvage Restricted under *S. spinosior* (ARS, ANPL 1999)

**OTHER STATUS:** Bureau of Land Management Sensitive (USDI, BLM AZ 2008)

**MANAGEMENT FACTORS:**

**PROTECTIVE MEASURES TAKEN:**

**SUGGESTED PROJECTS:** Distribution studies are needed to solve conflicting confusion of this species range.

**LAND MANAGEMENT/OWNERSHIP:** BLM – Arizona Strip Field Office.

## SOURCES OF FURTHER INFORMATION

**REFERENCES:**

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**MAJOR KNOWLEDGEABLE INDIVIDUALS:**

John Kartesz, North Carolina Botanical Garden.

**ADDITIONAL INFORMATION:**

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